

tion of the device, each said pair of connected pivotal axes replacing comparatively small pivotal axes found in standard oar locks with pivotal axes large enough to withstand the force generated by arm-and-leg-tandem action powering one's rowing motion and of preventing transverse torquing of the longitudinal and vertical axes during one's rowing motion due to arm-and-leg tandem action,

whereby one can enjoy the benefit of rowing a watercraft in the direction one faces by simply pushing, rather than pulling, the oars through the stroke phase of the rowing motion, and

whereby one gains greater power for rowing a watercraft by using direct arm-and-leg-tandem production of the rowing motion.

REMARKS--General

The amendment found above corrects technical errors in Claim 1 to overcome technical rejections of the claim, thereby clearly, distinctly, and definitely pointing out the invention and its patentability over prior art references.

Additionally, three small editorial corrections to the Specification have been made.

The Objections To The Specification And Claim Under 35 U.S.C. 112

Claim 1 is objected to and rejected under 35 U.S.C. 112 for "being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the

invention.” The Examiner pointed out two distinct violations in subparagraph (c) of Claim 1 and one violation in subparagraph (d) of Claim 1. The violations adversely affect the clarity and distinctness of the claim. Benefiting from having had the errors pointed out, the applicant saw the violations, agreed that they adversely affected the distinctness and clarity of Claim 1, and corrected both subparagraph (c) and subparagraph (d) to remove the unclear and indefinite recitations that the Examiner pointed out. The applicant believes that Claim 1 now fully complies with 35 U.S.C. 112.

Page 2, Paragraph Encompassing Lines 9-18, Replaced With New Paragraph

In the Specification U.S. Pat. No. 5,647,782 to Henry was incorrectly classed with a group of prior art references accomplishing the goal of forward-facing rowing, but not accomplishing the goal of providing for leg-assisted power for rowing that is conducted to the oars some way other than through the hands. U.S. Pat. No. 5,647,782 was removed from the incorrect grouping in the paragraph cited above, including the brief description of it which accompanies the inventions cited in that grouping.

Page 3, Paragraph Encompassing Lines 11-17, Replaced With New Paragraph

In the Specification U.S. Pat. No. 5,647,782 to Henry, which was incorrectly classed with a group of prior art references accomplishing the goal of forward-facing rowing, but not accomplishing the goal of providing for leg-assisted power for rowing that is conducted to the oars some way other than through the hands. U.S. Pat. No. 5,647,782 is now correctly inserted within a group which accomplishes both goals in the paragraph cited above, and the description of the

invention is corrected to accord with its correct classification.

Page 5, Lines 6-8m, Sentence Beginning "The crouch position...", Replaced

A factual error in the sentence cited above is corrected.

Conclusion

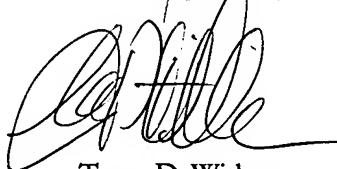
Having made the above amendment, the applicant holds that the application is now free of error and in proper form and condition for allowance, which the applicant respectfully requests.

Conditional Request For Constructive Assistance

The applicant amended Claim 1 of the application to make it clear and definite and point out its novelty over prior art. If this application is not in condition for allowance, the applicant here respectfully asks for the assistance and suggestions of the Examiner pursuant to M.P.E.P.

Statute 2173.02 and Statute 707.07(j) so that the applicant can place this application in condition for allowance as soon as possible and without the requirement for further proceedings.

Very Respectfully,

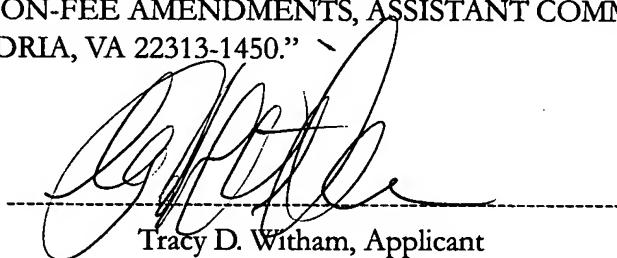


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Certificate of Mailing: I certify that on the date below this document and referenced attachments, if any, will be deposited with the U.S. Postal Service as first class mail in an envelope addressed to: "BOX NON-FEE AMENDMENTS, ASSISTANT COMMISSIONER FOR PATENTS ALEXANDRIA, VA 22313-1450."

2004 Jun 8



Tracy D. Witham, Applicant

Attachment: Appendix to Amendment A With Replacement Paragraphs Marked-Up to Indicate Changes

Appendix to Amendment A

With Replacement Paragraphs Marked-Up to Indicate Changes

Commissioner for Patents

Alexandria, VA 22313-1450

Sir:

Pursuant to Rule 121, the following is a copy of all of the paragraphs amended by the attached amendment A, with all changes indicated by bracketing deletions and underlining additions:

Page 2, paragraph encompassing lines 9-18, replace with the following new paragraph:

--Forward-facing rowing, considered singly, was the goal of U.S. Pat. No. 5,215,482 issued Jun., 1993, to Henry; and U.S. Pat. No. 5,248,272 issued Sep., 1993, to duPont, [; and U.S. Pat. No. 5,647,782 issued Jul., 1997, to Henry,] to cite recent examples. Henry's 1993 innovation achieves forward-facing rowing while basically preserving traditional rowing technique by means of placing a direction transfer mechanism between two first class levers, allowing the first class lever on the handle end to pivot against the inside end of the other first class lever so that the blade end of the oar propels the watercraft in the opposite direction it would otherwise, which is to say, forward. [Henry's 1997 innovation refines, but does not simplify, his 1993 patent.] DuPont's 1993 innovation makes use of mechanical devices such as gears, torque shafts, looms, and a linkage assembly to accomplish forward-facing rowing.

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Page 3, paragraph encompassing lines 11-17, replace with the following new paragraph:

--That traditional rowing limits the force that can be applied in propelling a watercraft to that which the rower can exert [directly] through the hands alone has also spurred prior inventions, which have combined a strategy to add leg power to the oars which is not conducted through the hands with a strategy to achieve forward-facing rowing. U.S. Pat. No. 5,647,782 issued Jul., 1997, to Henry; U.S. Pat. No. 5,685,750 issued November, 1997, to Rantilla[.] and U.S. Pat. No. 6,109,988 issued August, 2000, to Dunn, Jr., are recent examples. Henry's 1997 invention adds leg power to oars without directing it through the rower's hands by means of a slideable inboard support assembly holding a support post and mounting bracket which is powered by the rower's legs and feet. To accomplish this both inboard and outboard support assemblies are used in conjunction with dual pivot elements, an oar brace, and a stretcher assembly in addition to foot supports and an oarlock assembly. Rantilla's 1997 invention uses cord attachments and pulleys and associated apparatuses to operate the oars. Dunn, Jr.'s invention also uses pulleys and associated apparatuses to operate the oars.

Page 5, lines 6-8m, sentence beginning "The crouch position...", replace with the following new sentence:

--The crouch position just described above produces body mechanics by which a healthy person can generate [150-170%] 50-70% more force during the stroke phase of

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a rowing motion than is possible for the same healthy person using a racing scull.^f

Claim 1 has been amended as follows:

(Amended) [Claims:] **Claim:** I claim:

a device for producing forward-facing rowing of a watercraft with direct arm-and-leg-tandem production of the rowing motion, comprising:

- (a) a thrust abutment and reclined back rest of sufficient strength to withstand backward force generated by rowing a watercraft when one powers oars through the stroke phase of a rowing motion by pushing against a handle-and-pedal assembly with arm-and-leg-tandem action simultaneously on each of two said handle-and-pedal assembly components,
- (b) said thrust abutment and reclined back rest and a seat located to the fore of said thrust abutment and reclined back rest being tilted backward sufficiently far to place a handle behind a pedal on each of two said handle-and-pedal assembly components to prevent said handle from extending beyond one's hand's reach when one's legs are extended against said pedal without thereby causing said handle to be positioned behind said thrust abutment and reclined back rest when one's legs are retracted and said pedals are pulled back,

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- (c) said handle and pedal assembly components [, to both starboard and port sides,] to the starboard side and said handle-and-pedal assembly components to the port side being positioned relative to each other and to positions of [all] an apparatus support structure [components] so that the trajectory of said handle-and-pedal assembly components when used to row said watercraft do not intersect at any point with positions occupied by each other or by components of said apparatus support structure, and
- (d) a pair of connected pivotal axes to [both] the starboard side and a pair of connected pivotal axes to the port side, one axis of each said pair of connected pivotal axes to be pivotal on a longitudinal line parallel with a line bisecting the device from fore to aft, and the second axis of each said pair of connected pivotal axes to be pivotal on a vertical line relative to the orientation of the device when said oars are extended directly to the sides relative to the orientation of the device, each said pair of connected pivotal axes replacing comparatively small pivotal axes found in standard oar locks with pivotal axes large enough to withstand the force generated by arm-and-leg tandem action powering one's rowing motion and of preventing transverse torquing of the longitudinal and vertical axes during one's rowing motion due to arm-and-leg tandem action,

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whereby one can enjoy the benefit of rowing a watercraft in the direction one faces by simply pushing, rather than pulling, the oars through the stroke phase of the rowing motion, and

whereby one gains greater power for rowing a watercraft by using direct arm-and-leg-tandem production of the rowing motion.